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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,051	07/30/2001	Paolo Balbi	383-1006	9822
7590 07/28/2005			EXAMINER	
JENNER & BLOCK ONE IBM PLAZA CHICAGO, IL 60611			HOOK, JAMES F	
			ART UNIT	PAPER NUMBER
			3754	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/918,051	<b>Applicant(s)</b> BALBI ET AL.	
	<b>Examiner</b> James F. Hook	<b>Art Unit</b> 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13,17,21,22,30-33 and 35-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13,17,21,22,30-33 and 35-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The amendment filed January 27, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the specification does not support moving the cutting in the unfolded condition limitation prior to the step of drawing the pipe, where the specification only supports the step of cutting in the unfolded condition after the drawing of the pipe.

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13, 17, 21, and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As set forth above, there is no support in the specification that supports placing the cutting in the unfolded condition prior to the step of drawing the pipe, therefore, such is considered new matter.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 21, 30-33, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo in view of Takei. The patent to Kubo discloses the recited pipe for pressurized fluid feed systems including diesel engines comprising a wall 1 of predetermined thickness with an internal surface and an external surface, and an internal bore with a predetermined diameter for flow of fluid where the internal and/or external are treated by means of a nitriding method to obtain an increased hardness with regard to stresses, the pipe is made of steels, the external diameter is much greater than the internal diameter, the front end inherently has to be designed for connection and the surface treatment extends the length of the pipe and inherently would cover the connection portion also, where the specific use of the article is considered used for fuel common rails as such is merely intended use, and the method of nitriding is also given. The patent to Kubo discloses all of the recited structure with the exception of using a pulsed gas to provide the nitride layer. The patent to Takei discloses the recited method of nitriding a metal substrate using a pulsed gas method to achieve more uniform results, where the reversed flow would inherently mean the pressure of the gas would change from pressurized to a vacuum and passing from a

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positive to a negative pressure which would inherently occur to pulse the flow and remove the gas would inherently mean a change in pressures. It would have been obvious to modify the method of nitriding used in Kubo by substituting a pulsed gas method to provide a more uniform nitride layer on the substrate layer as suggested by Takei.

Claims 13, 17, 21, 22, 30-33, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori (JP 11 166 673) in view of Takei. The reference to Yoshinori discloses the recited pipe for pressurized fluid feed systems including diesel engines comprising a wall 1 of predetermined thickness with an internal surface and an external surface, and an internal bore with a predetermined diameter for flow of fluid where the internal surface is treated by means of a nitriding method to obtain an increased hardness with regard to stresses, the pipe is made of steels, the external diameter is much greater than the internal diameter, the front end inherently has to be designed for connection and the surface treatment extends the length of the pipe and inherently would cover the connection portion also, where the specific use of the article is considered used for fuel common rails as such is merely intended use, and the method of nitriding is also given. The patent to Yoshinori discloses all of the recited structure with the exception of using a pulsed gas to provide the nitride layer. The patent to Takei discloses the recited method of nitriding a metal substrate using a pulsed gas method to achieve more uniform results. It would have been obvious to modify the method of nitriding used in Yoshinori by substituting a pulsed gas method to provide a more uniform nitride layer on the substrate layer as suggested by Takei.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo in view of Takei as applied to claims 13, 21, 30-34, and 36-39 above, and further in view of Tomita. The patent to Kubo as modified discloses all of the recited structure with the exception of utilizing an autofrettage method to prestress the pipe. The patent to Tomita discloses that it is old and known in diesel engine fuel rails to prestress the rail using an autofrettage method. It would have been obvious to one skilled in the art to modify the pipe in Kubo as modified by prestressing the pipe using an autofrettage method as such would pressure fatigue resistance as suggested by Tomita.

Claims 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori (JP 11 166 673) in view of Takei, Ishimoto, and Tomita. The reference to Yoshinori discloses the recited pipe for pressurized fluid feed systems including diesel engines comprising a wall 1 of predetermined thickness with an internal surface and an external surface, and an internal bore with a predetermined diameter for flow of fluid where the internal surface is treated by means of a nitriding method to obtain an increased hardness with regard to stresses, the pipe is made of steels, the external diameter is much greater than the internal diameter, the front end inherently has to be designed for connection and the surface treatment extends the length of the pipe and inherently would cover the connection portion also, where the specific use of the article is considered used for fuel common rails as such is merely intended use, and the method of nitriding is also given. The patent to Yoshinori discloses all of the recited structure with the exception of using a pulsed gas to provide the nitride layer, nitriding both the inner and outer side of the pipe, and utilizing an autofrettage method to

prestress the pipe. The patent to Takei discloses the recited method of nitriding a metal substrate using a pulsed gas method to achieve more uniform results. It would have been obvious to modify the method of nitriding used in Yoshinori by substituting a pulsed gas method to provide a more uniform nitride layer on the substrate layer as suggested by Takei. The patent to Tomita discloses that it is old and known in diesel engine fuel rails to prestress the rail using an autofrettage method. It would have been obvious to one skilled in the art to modify the pipe in Yoshinori by prestressing the pipe using an autofrettage method as such would provide pressure fatigue resistance as suggested by Tomita thereby strengthening the pipe to resist premature failure. The patent to Ishimoto discloses that it is old and well known in the art to treat both an inner and outer surface of a metal cylindrical pipe structure with a carburizing or nitriding treatment to provide for a hardened layer on both sides of the structure. It would have been obvious to one skilled in the art to modify the pipe in Yoshinori by nitriding both the inner and outer layers of a fuel injection pipe section to provide a harder surface as suggested by Ishimoto where such would provide a stronger part that is less likely to fail prematurely thereby saving replacement costs.

### ***Response to Arguments***

Applicant's arguments filed January 27, 2005 and May 16, 2005 have been fully considered but they are not persuasive. As set forth above the method in Takei is pulsed and results in the gas being put in and removed, it is considered that inherently that would mean the pressure would have to change from a positive pressure of the

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treating gas to a negative pressure to remove it, and that such would inherently result in a change in pressure to create the pulses. However, it is not clear from Takei that constant pressure is ever kept, and such therefore there is no suggestion that the pulsations don't result in pressure changes, as the examiner believes they do. The recited column 6, lines 10-19 do not recite that pressure is uniform in any way. The direction of flow may change but that would only occur if there were a difference in pressure occurring. Such is also supported in Takei by column 8, lines 53-59 which discuss the nitriding gas being reversed is in a pulsed state, further suggesting that Takei teaches the basic concept of pulsing the nitriding gas during the process of nitriding. The pressure of the gas in the chamber must change from one of the sources of gas to allow the gas to enter the chamber and then leave the chamber, an inherent pressure difference must exist. Any argument directed toward the direction of flow is therefore not considered persuasive especially when no claim language exists that would exclude a change in flow direction to meet the pulsed gas pressure limitation. With respect to Yoshinori, the claims do not require the outside being coated as well in the original set of claims rejected under the art, with respect to new claims 40-44, however, which include this limitation such is moot in light of the rejection above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



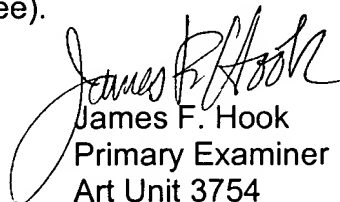
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
James F. Hook  
Primary Examiner  
Art Unit 3754

JFH